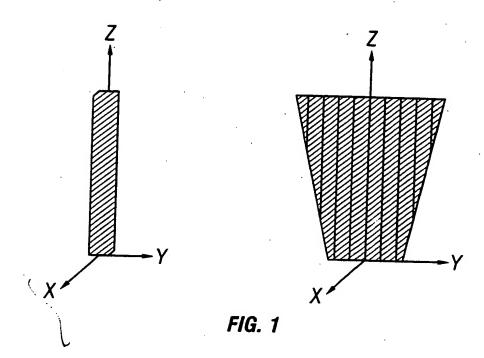
#### FORCE-BALANCED ROLLER-CONE BITS, SYSTEMS, DRILLING METHODS, AND DESIGN METHODS Inventor: Sh

Inventor: Shilin Chen
Date Filed: January 27, 2004
Attorney's Docket: 074263.0209 (SC-98-025 C3-E)

Sheet 1 of 8



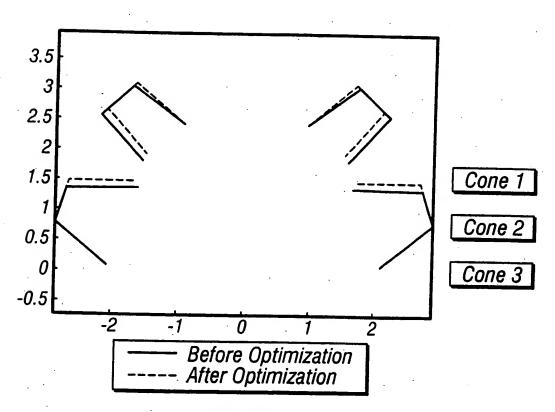
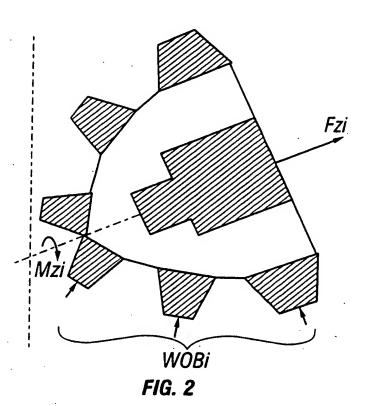


FIG. 7C

# FORCE-BALANCED ROLLER-CONE BITS, SYSTEMS, DRILLING METHODS, AND DESIGN METHODS Inventor: Shilin Chen Date Filed: January 27, 2004 Attorney's Docket: 074263.0209 (SC-98-025 C3-E) Sheet 2 of 8



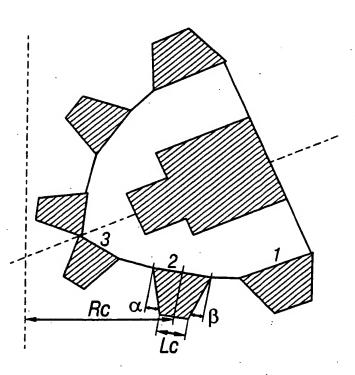
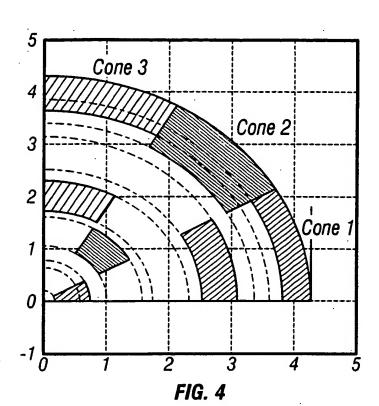
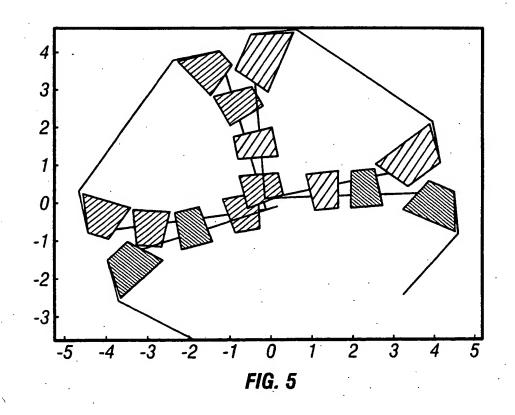


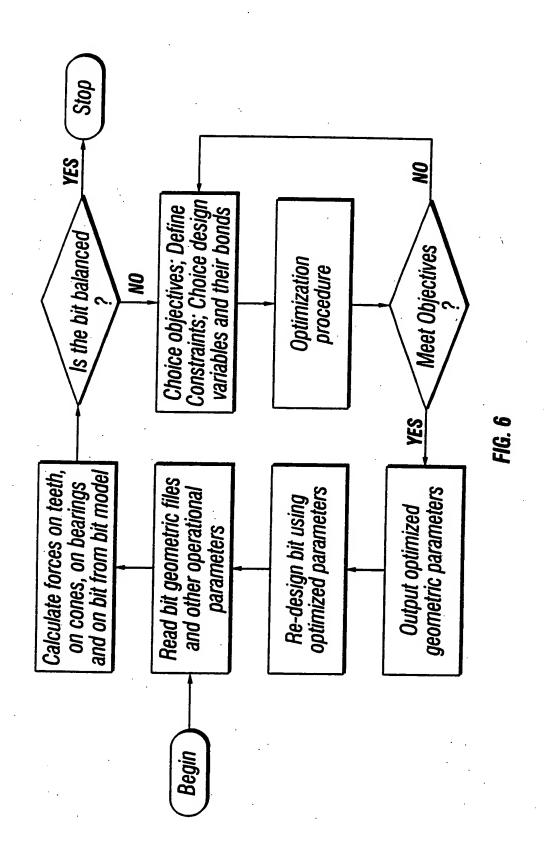
FIG. 3

FORCE-BALANCED ROLLER-CONE BITS, SYSTEMS, DRILLING METHODS, AND DESIGN METHODS DESIGN METHODS
Inventor: Shilin Chen
Date Filed: January 27, 2004
Attorney's Docket: 074263.0209 (SC-98-025 C3-E)
Sheet 3 of 8





### SYSTEMS, DRILLING METHODS, AND DESIGN METHODS Inventor: Shilin Chen DESIGN METHODS Inventor: Shilin Chen Date Filed: January 27, 2004 Attorney's Docket: 074263.0209 (SC-98-025 C3-E) Sheet 4 of 8



FORCE-BALANCED ROLLER-CONE BITS, SYSTEMS, DRILLING METHODS, AND **DESIGN METHODS** 

Inventor: Date Filed:

Shilin Chen

Date Filed: January 27, 2004 Attorney's Docket: 074263.0209 (SC-98-025 C3-E)

Sheet 5 of 8

D/G

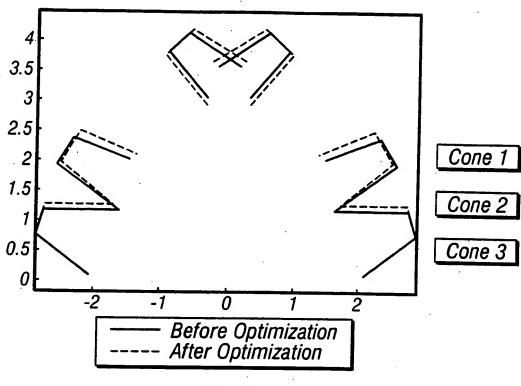


FIG. 7A

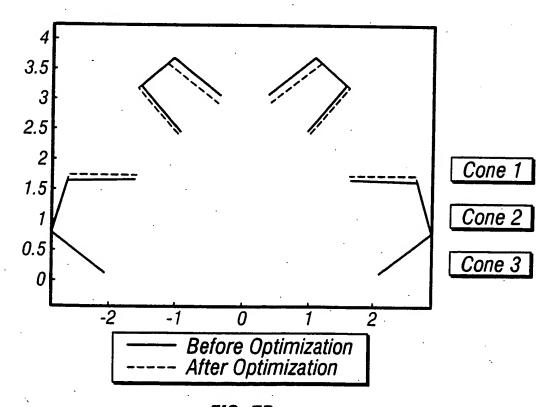
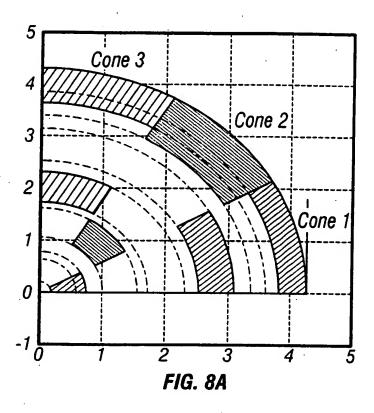
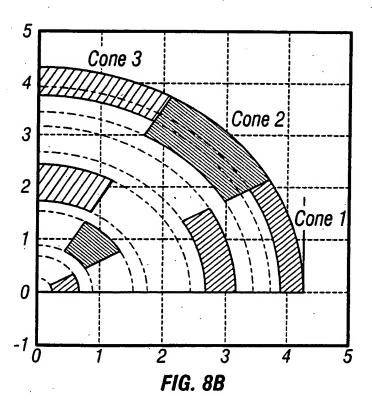


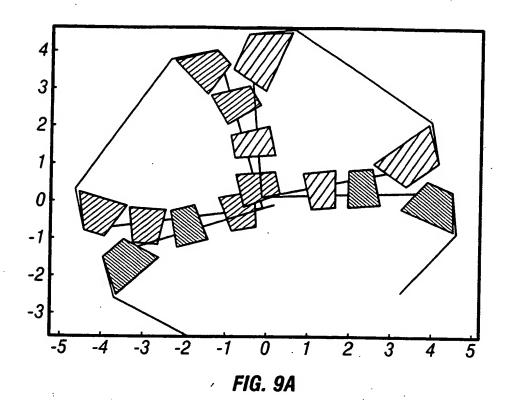
FIG. 7B

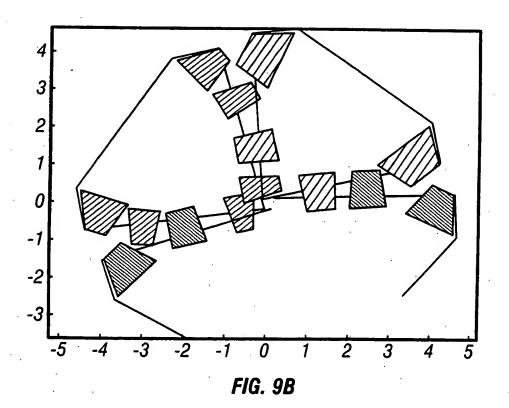
FORCE-BALANCED ROLLER-CONE BITS, SYSTEMS, DRILLING METHODS, AND DESIGN METHODS DESIGN METHODS
Inventor: Shilin Chen
Date Filed: January 27, 2004
Attorney's Docket: 074263.0209 (SC-98-025 C3-E)
Sheet 6 of 8





# FORCE-BALANCED ROLLER-CONE BITS, SYSTEMS, DRILLING METHODS, AND DESIGN METHODS Inventor: Shilin Chen Date Filed: January 27, 2004 DESIGN METHODS Inventor: Shilin Chen Date Filed: January 27, 2004 Attorney's Docket: 074263.0209 (SC-98-025 C3-E) Sheet 7 of 8





## FORCE-BALANCED ROLLER-CONE BITS, SYSTEMS, DRILLING METHODS, AND DESIGN METHODS Inventor: Shilin Chen Date Filed: January 27, 2004 DESIGN METHODS Inventor: Shilin Chen Date Filed: January 27, 2004 Attorney's Docket: 074263.0209 (SC-98-025 C3-E) Sheet 8 of 8

